



# Grower Update

ISSUE 44 – APRIL 2022

Welcome to the April issue of our BPS newsletter. We hope you find the articles contained in this issue informative.

## **This issue contains:**

BPS Activities

RSD Update

Shed Meeting Summary

- Productivity data
- Variety distribution
- Variety trials
- Wild sorghum management
- Fall armyworm
- AutoWeed
- Burdekin Irrigation Project
- Spray technology and label updates

Staff Contacts



## BPS ACTIVITIES

Through the first part of the year, staff have been busy RSD testing, conducting plant source inspections, assisting with variety selection and providing planting advice. There has also been a considerable amount of time spent soil sampling and analysing results. The BPS board introduced a short term soil testing subsidy for members around 3 years ago, however with increasing costs, the board has decided to remove the subsidy which will bring the price back in line with other service providers in the region. The subsidy will remain until 30<sup>th</sup> June 2022, after which the price will revert to cost recovery.

By the end of February 2022, BPS staff had received orders for approved seed cane of around 8000 t. Across all plots and all varieties, there is only around 7000 t available. To manage this, an allocation system has been implemented to ensure distribution is fair and equitable. Many growers who pre-ordered may have their allocation of KQ228 and Q240 limited. Allocations are based on hectares of BPS levies paid.

With a fair proportion of planting already completed across the district, approved seed cane sales have been just over 2000 t. This means that there is potential that some growers may not take their pre-ordered approved seed cane. *Could any member who no longer requires approved seed cane, or has changed their mind with variety orders, please contact their BPS Field Officer as soon as possible.* We do not want to be left in a situation where we restrict approved seed cane sales early in the season by holding cane for growers who ordered, then be left with approved seed cane in plots at the end of the year due to many growers not taking their pre-ordered cane.

Please note that BPS does not set prices for approved seed cane, these are set by the plot owner/manager.

## RSD UPDATE

BPS staff have been incredibly busy with RSD testing for both approved seed plots and growers. RSD testing has occurred almost every day since the start of the year, apart from when rain did not allow us access to paddocks. To date, over 1500 RSD samples have been collected and analysed. It is worth noting that these samples can only be taken up until around 9:30-10 am. Past that time the xylem sap is unable to be pumped from the stalk.

To date, over 300 individual blocks have been tested. Of these around 7% have tested positive to RSD. Remember, when we are testing for RSD, only a tiny proportion of the block is actually tested. If we look at the total number of stalks in a 20 Ha block, we are only testing 1 in 115,000 stalks. So if there is a low level of RSD in the block, it is very unlikely it will be detected. For this reason, a lot more focus should be on management rather than testing. In terms of management, ensure the following steps are taken:

- Regularly purchase approved seed cane
- Ensure fallows are free from volunteers. RSD can only survive in cane plants, not soil – so if all plants/volunteers are eradicated, the bacteria will not remain in the block.
- Clean and sterilise all equipment when moving between blocks and farms.

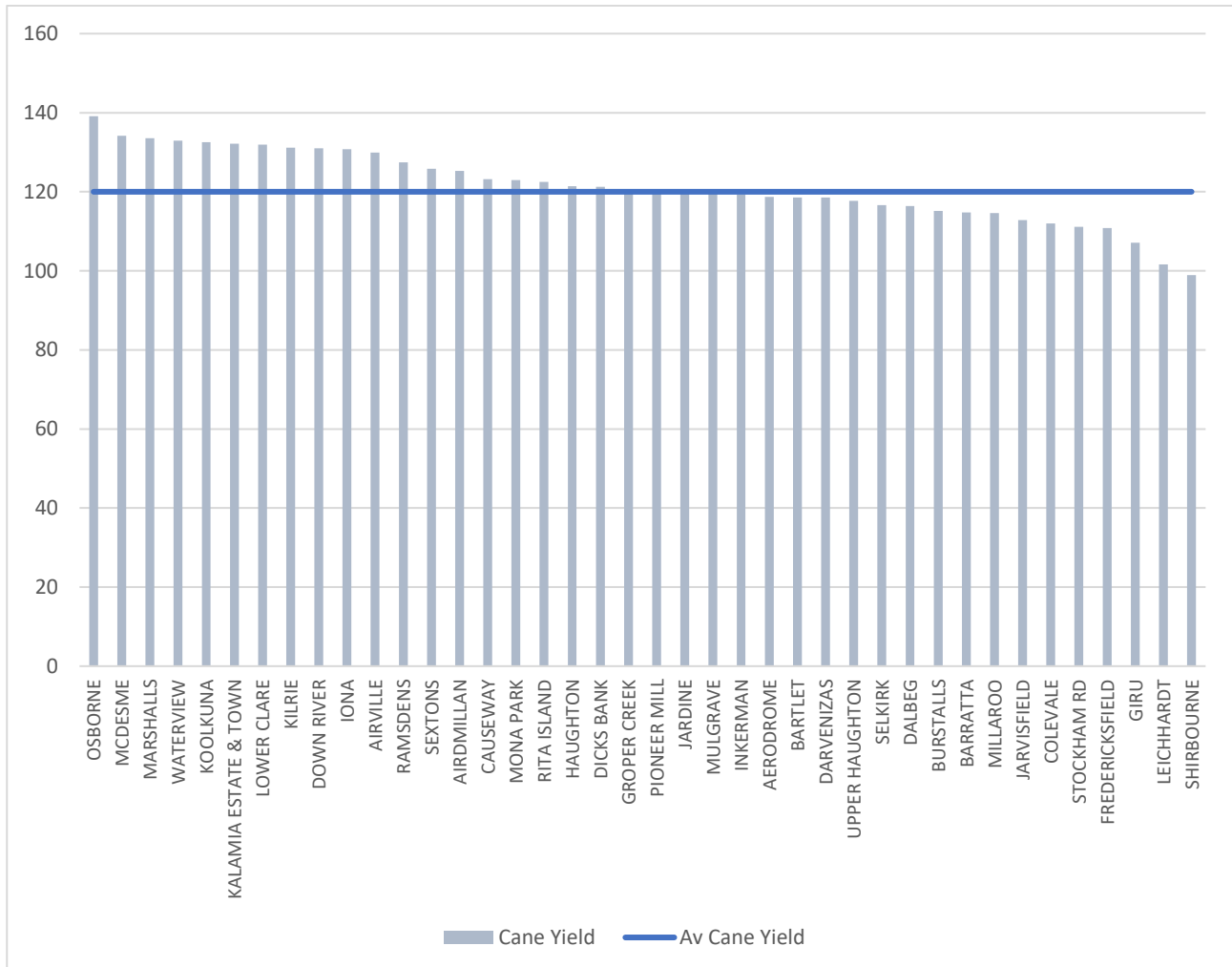
The last dot point is particularly important with planting season in full swing – RSD bacteria can survive in dip planters, or anywhere water from fungicide sprays collects. So please ensure dips are dropped, and planters are washed down, cleaned and sterilised between blocks. Sterimax is still available from BPS at a subsidised price to assist members in managing this disease on farm.

## SHED MEETING SUMMARY

During the March shed meetings many topics were covered by presenters from BPS, Farmacist and SRA. The following is a summary of these topics.

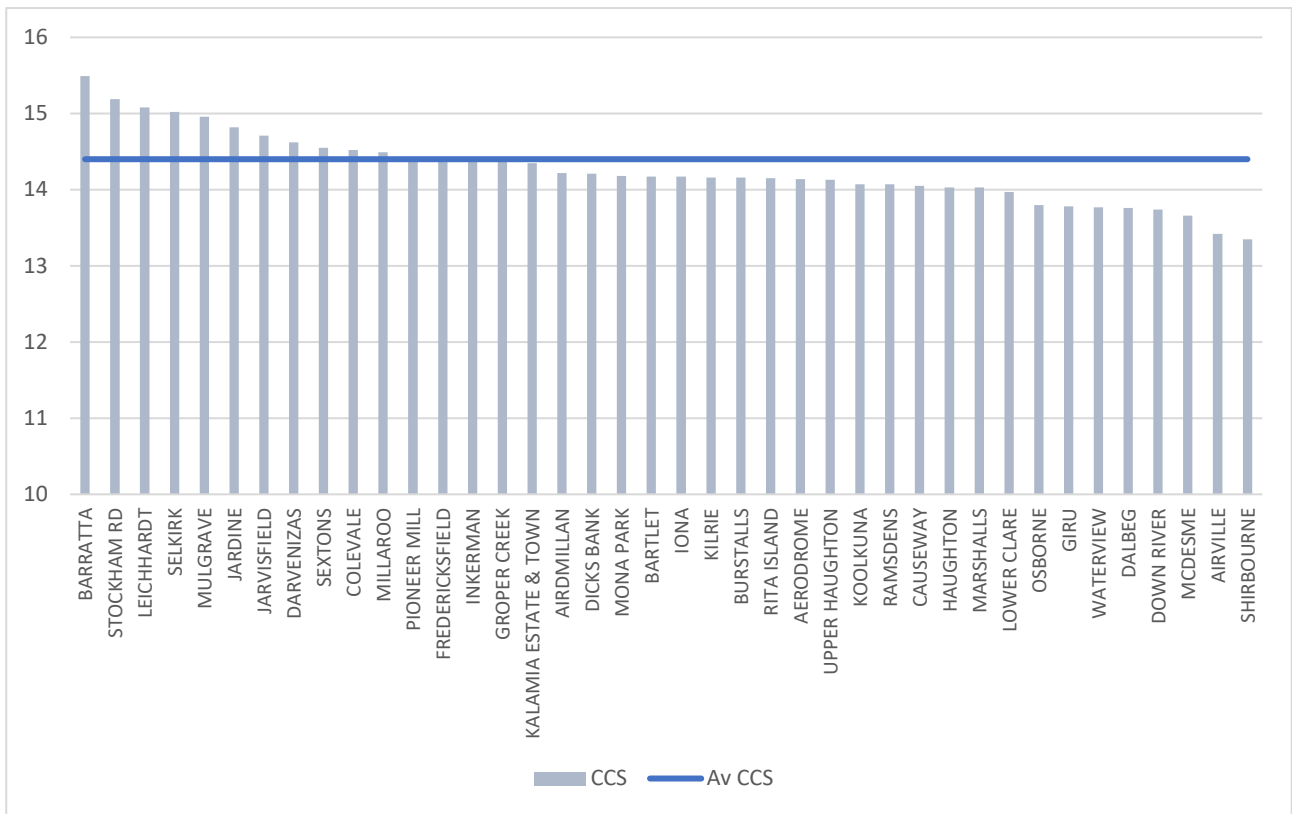
### Productivity Data

#### Tonnes cane/ha



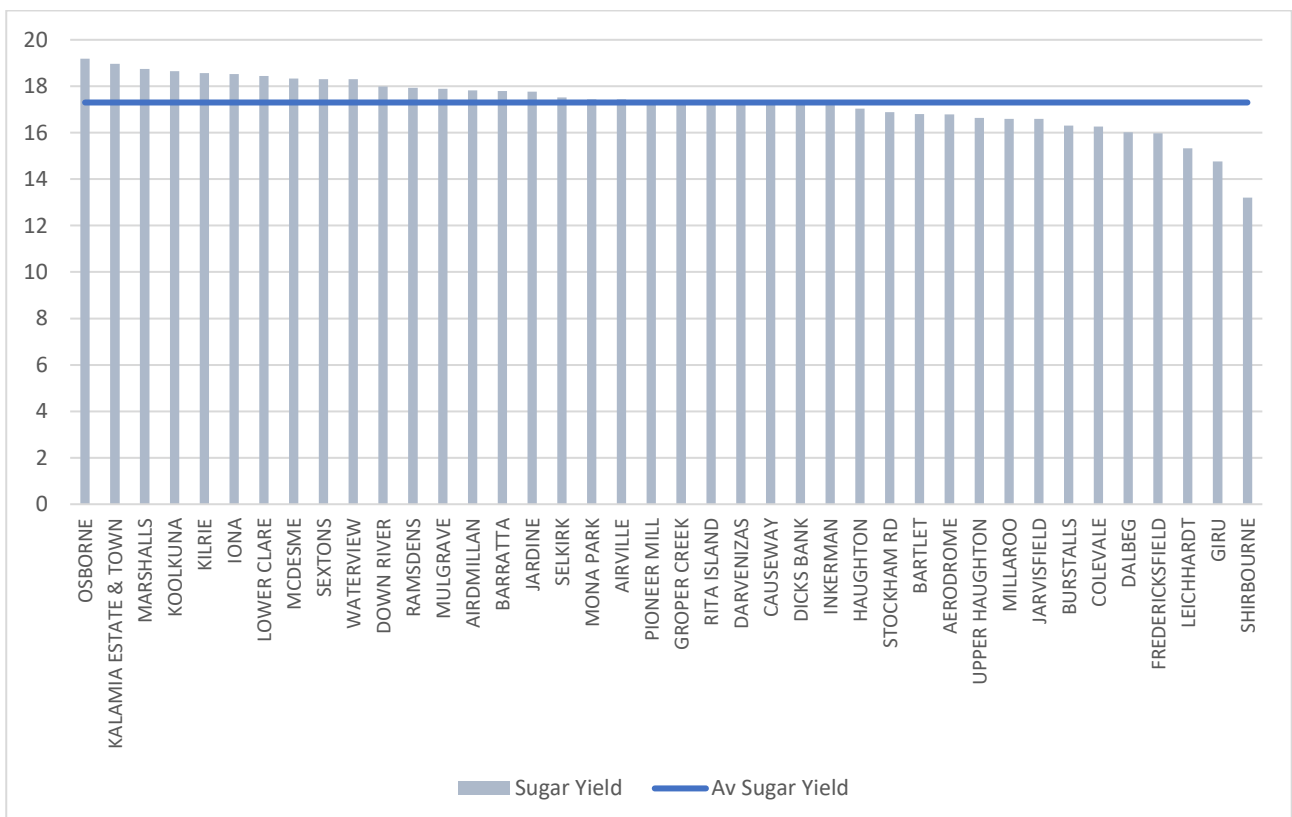
- Cane yields ranged from 99 t/ha at Shirbourne up to 139 t/ha at Osborne.
- Average cane yield in 2021 was 120 t/ha, which was slightly higher than 2020 (119 t/ha). This continues a trend that we've seen since 2018 where there has been a gradual (1 t/ha) increase in yield each year.
- Koolkuna was the big improver last season, moving from an average TCH of 115 t/ha in 2020 to 133 t/ha in 2021. Why this has occurred is unclear, but it isn't due to an increase in plant cane area as there was 27% plant cane in 2020 and 24% in 2021

CCS



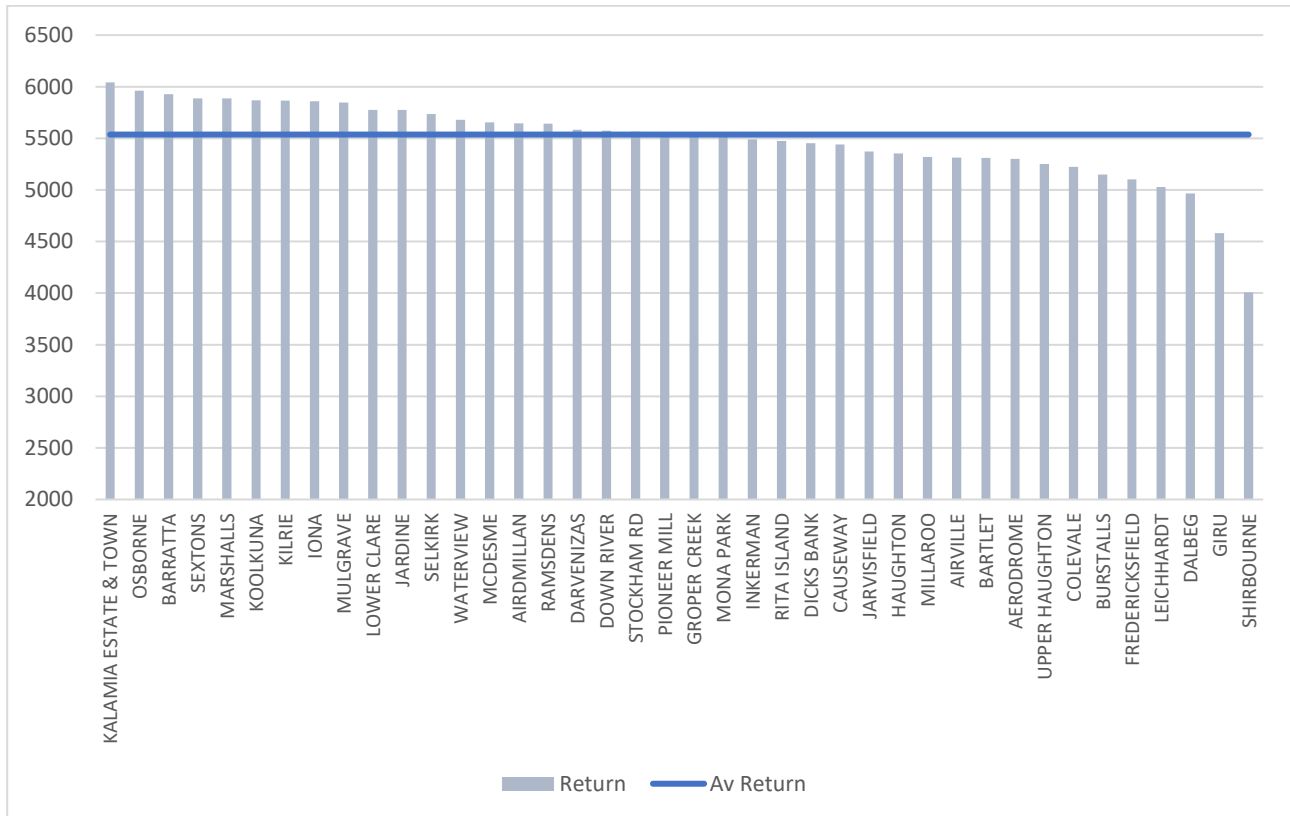
- The average CCS for 2021 was 14.4 which was slightly lower than 2020 (14.6). This is consistent with trends over the last few years, where as cane yields have increased, CCS has slightly decreased.
- The highest CCS was 15.5 for the Barratta group, with the lowest being 13.4 at Shirbourne.

Tonnes sugar/ha



- In 2021 the average sugar yields ranged from 13.2 at Shirbourne, up to 19.2 for Osborne. The Burdekin average was 17.3 t/ha, slightly lower than the 17.5 t/ha average that we've seen for the previous 3 years.
- The big increase in tonnes of cane/ha in Koolkuna has translated into an extra 2 t/ha of sugar in 2021 when compared to 2020.

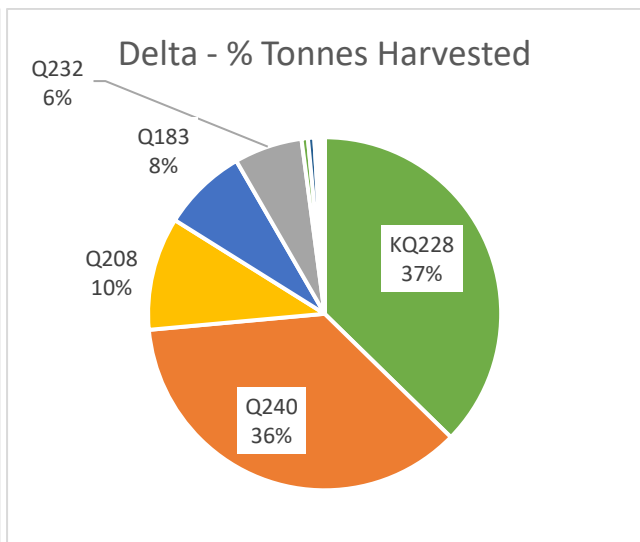
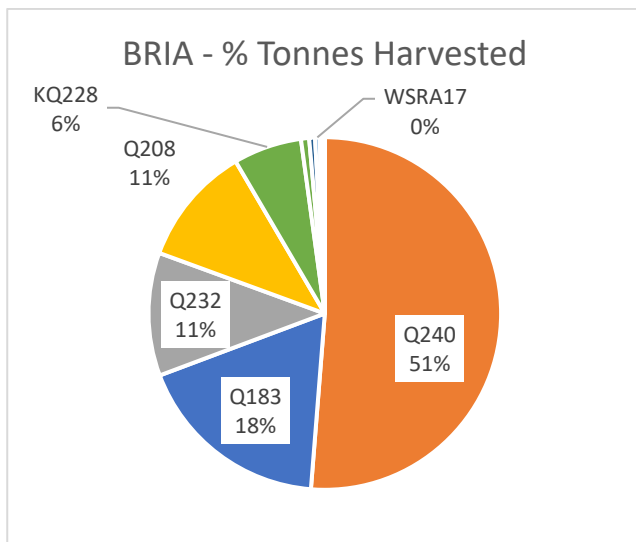
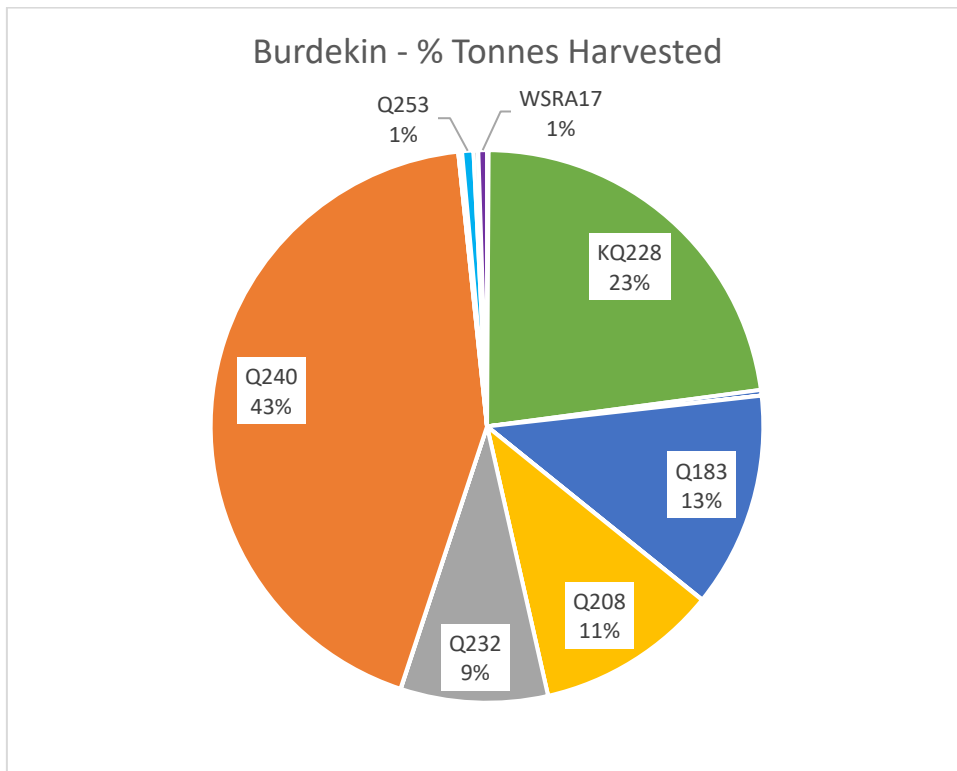
**Return (based on a sugar price of \$575/t and harvesting and levies of \$8.50/t)**



- \$/ha return averaged \$5536; ranging from \$6042/ha for Kalamia Estate and Town to \$4008/ha for Shirbourne.
- It is interesting to observe and compare the \$ returns/Ha (which accounts for the cane price formula and harvesting and levies) and TSH graphs. Often it is commented that growers are paid on TSH, but it is more accurate to say that growers are paid on TCH and CCS applied to the cane price formula. For example, Barratta was ranked 15<sup>th</sup> for tonnes of sugar, but was the 3<sup>rd</sup> highest for return.

If you were unable to attend the shed meetings, but would like a copy of your group productivity report, please contact any of the BPS staff to arrange this.

**Variety Distribution**



Q240 is the main variety being grown in the Burdekin, making up 43% of the tonnes harvested in 2021. In the BRIA this increases to over 50% of the tonnes delivered. In the Delta KQ228 had the greatest tonnes delivered in 2021, followed closely by Q240. Q183, Q208 and Q232 made up the majority of the rest of the tonnes delivered.

While the amount of Q240 being grown reflects its broad adaptation to a range of soil types and harvesting times, it is worth remembering that over-reliance on a single variety can be risky from a biosecurity perspective. For example if there was a disease or pest incursion that only affected Q240, then potentially half of the district’s cane supply could be at risk. This is why we recommend that growers plant a mix of varieties.

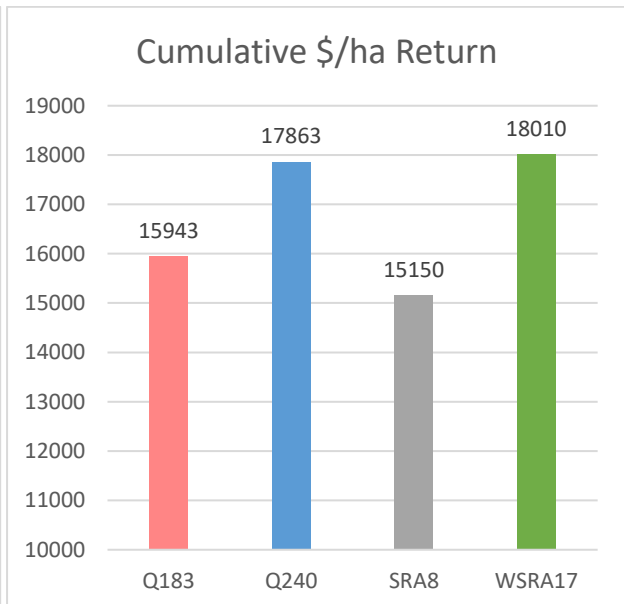
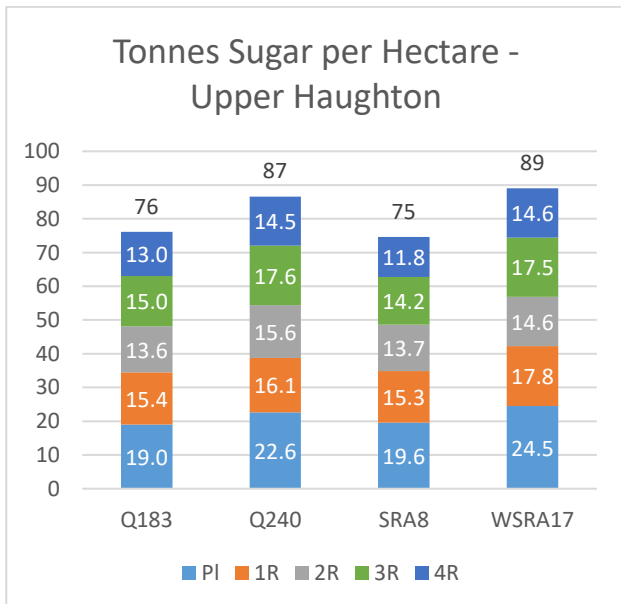
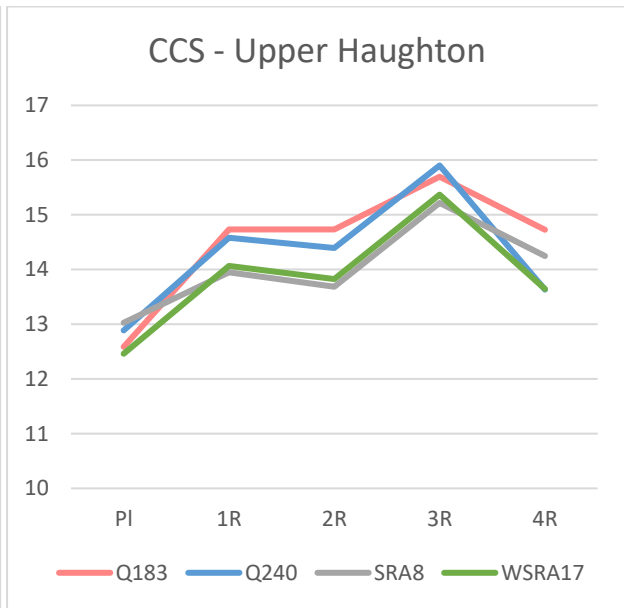
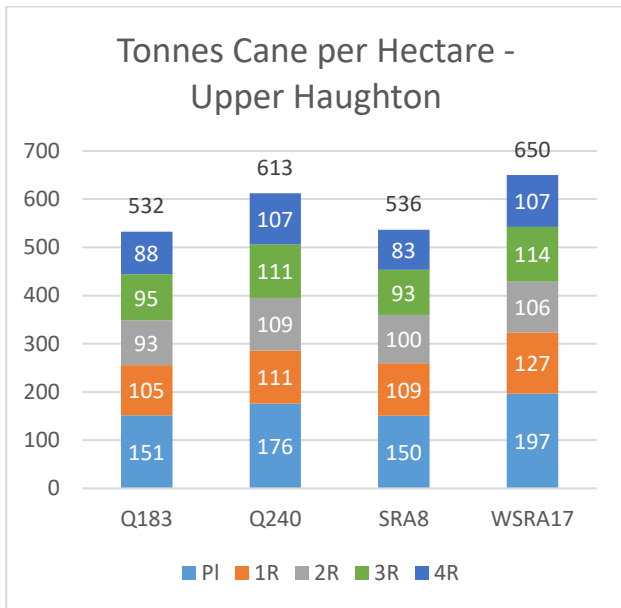
## Variety Trials

### Upper Haughton

This trial site gives us the best indication of how WSRA17 will perform as we have data from plant cane through to 4<sup>th</sup> ratoon. Soils at this site are mostly clay duplex with patches of light cracking clay.

WSRA17 had the best overall performance in terms of \$/ha return, tonnes of cane and tonnes of sugar per hectare. However the CCS was generally lower than the other varieties in the trial.

Q240 was the second best performing variety overall. Total tonnes of cane were a bit lower than the WSRA17, but this was counteracted by a better CCS.

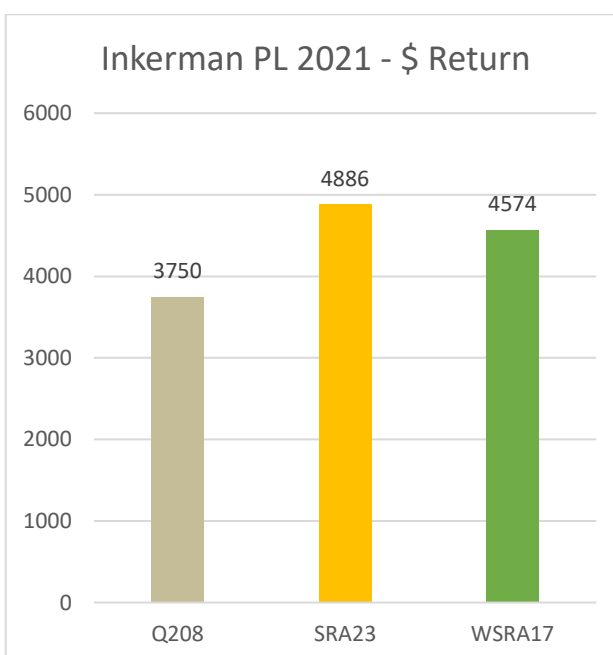
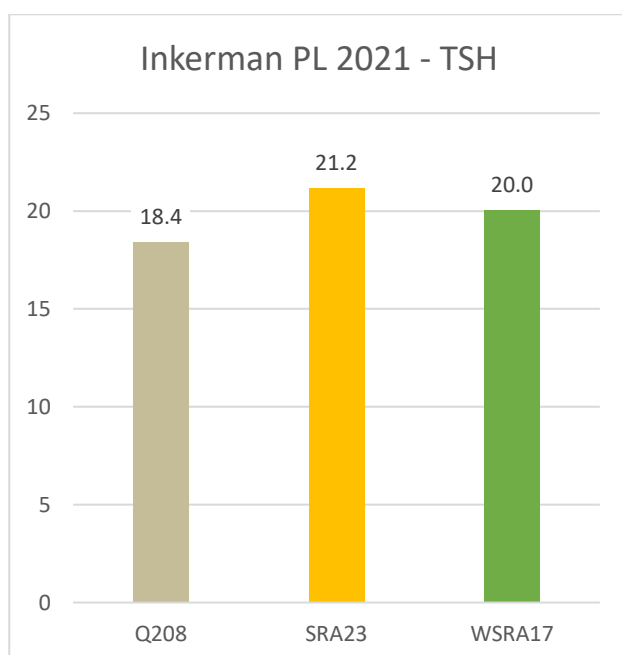
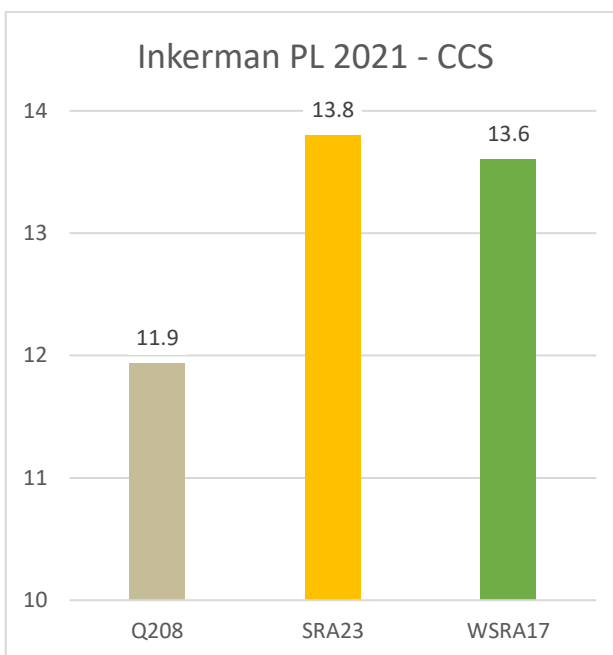
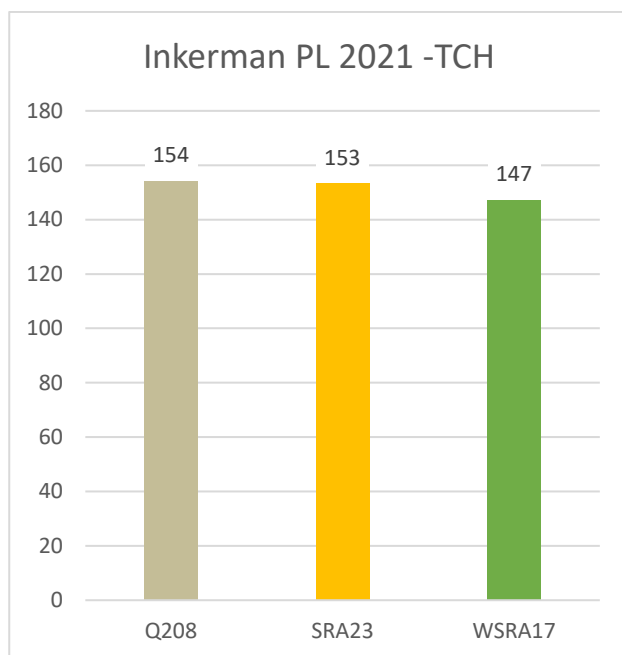


\$/ha Return calculated using a sugar price of \$400/t and harvesting and levies of \$8.50/t

## Inkerman

This trial site is on a non-cracking clay and has the two most recently released varieties in it – SRA23 and WSR17. Planting occurred in May, 2020. Despite some challenges at harvest with mill break-downs and wet weather we were still able to get reasonable results. By the final day of the trial the block had been burnt for 4 days, and all varieties suffered a CCS penalty because of this.

The commercial standard variety for this trial was Q208 and it had the highest tonnes cane per hectare, but the worst CCS – being almost 2 units behind SRA23. The trial was harvested at the end of July, which may have had some effect on the CCS for Q208. SRA23 had almost the same tonnes cane per hectare as the Q208, but was nearly a unit higher in CCS; giving it the highest overall tonnes of sugar and \$ return.



\$/ha return calculated using a sugar price of \$450/t and harvesting and levies of \$8.50/t



## Wild Sorghum Management

Wild sorghum is a weed that many growers within the Burdekin are struggling to control. This prolific weed can produce seeds that are viable for an extended period, meaning that the seeds produced this season could reappear within a paddock for the next 5-7 years. The key to controlling sorghum is limiting the seed bank within the soil. Evan Shannon from Farmacist provided key messages and suggestions for sorghum control.

The fallow period is an ideal time to manage weeds such as sorghum. Growers can access blocks with ease and are able to use a variety of methods to control wild sorghum. Some suggestions for sorghum control in fallow paddocks include utilising a bare fallow so that knock-down chemicals may be used or a legume fallow where growers can take advantage of the crop being a broad leaf to control grass weeds.

In plant cane, pendimethalin (e.g. Stomp Xtra®) or S-metolachlor (e.g. Dual Gold®) are post plant pre-emergent residual options that will help to control germinating weeds, but not plants that have already emerged. Small plants (less than 5 leaf) can be controlled with paraquat in mixtures with diuron or metribuzin (Mentor®). Isoxaflutole (e.g. Balance®) can be used as a directed spray once the cane is out of hand to control late germinations.

Wild sorghum will ratoon similarly to sugarcane and these plants can be particularly difficult to control. Evan recommends that growers spot spray these plants as soon as they are evident within the ratooning sugarcane crop with either glufosinate (Basta®) or glyphosate. Glufosinate will be less damaging to the emerged sugarcane.

### Key points:

- Fallow management
  - Keep on top of spray applications in bare fallows to keep the plant population down, or
  - Plant a legume crop where specific grass herbicides can be used.
- In plant cane use residual products such as pendimethalin or S-metolachlor; or isoxaflutole as a directed spray at out of hand.
- In severely infested paddocks, even with the best herbicide strategy, there will still be some escapes in plant cane so a chipping regime will need to be employed.
- Knockdown products are effective on small weeds but won't control larger ones
- In ratoons spot spray with glufosinate or glyphosate.

*This is general advice only and may not be suitable for your situation. For specific advice contact your agronomist.*



## Fall Armyworm (FAW)

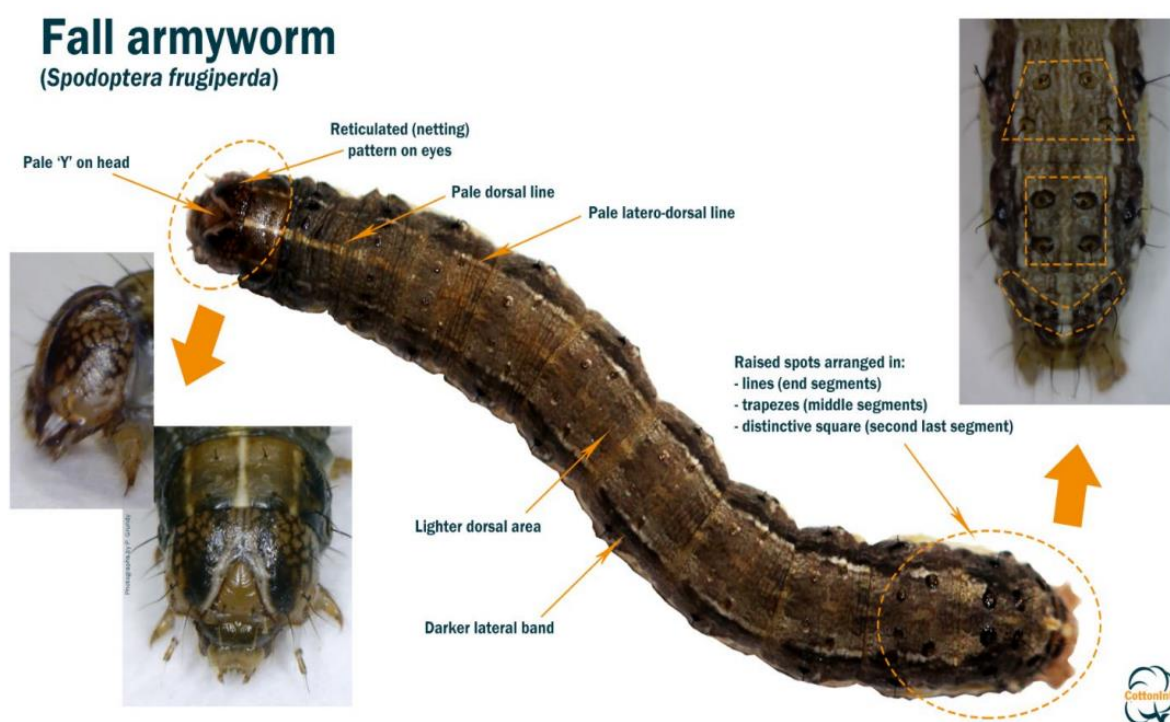
Fall armyworm is present in the Burdekin, where it is predominantly affecting corn crops. While sugarcane is a food source for FAW it is not the preferred choice. When FAW has been found in sugarcane in the Burdekin there has been no indication of loss of production at this stage.

When FAW has been found in sugarcane it has been young plant cane that has been affected. The common factor in these blocks has been ineffective control of grass weed populations, creating a viable food source for the FAW.

In sugarcane control with insecticides is typically not necessary as in most cases FAW will be controlled by natural predators and diseases. Spraying will disrupt these biocontrol agents and chemical control should be used as a last resort.

Fall armyworm is similar in appearance to a number of other caterpillar pests. If you suspect you have FAW, contact BPS, Farmacist, an agronomist or DAF for identification advice.

Identifying Fall armyworm (Image credit: Paul Grundy)



## AutoWeed

Townsville based robotic spray technology company, AutoWeed, is working in conjunction with JCU and SRA to develop new automated spraying technology. This “green-on-green” technology is an example of the next generation of farming where growers will be able to use less chemical per spray event whilst having the same efficacy on current weed populations.

The technology utilises a camera-computer combination that uses artificial intelligence to learn and identify different plants in the ground by their shape, texture and colour. Once the system has been “trained” to recognise weeds, the computer system can turn on and off individual nozzles to target specific plants within a crop. This technology aims to reduce the volume of chemicals needed to spray weeds within a paddock. This will in turn reduce the cost of chemical applications and reduce the chances of resistance build up.

The technology has been adapted to standard 4 row and 13 row spray booms. Trials are continuing in the Burdekin to compare the efficacy of robotic spot spraying and standard blanket spraying systems under different spraying conditions and with different configurations. Speeds of 8 to 10 km/h are currently being trialled and recommended for the use of this technology. This is comparable to current spray speeds.

## **Burdekin Irrigation Project**

The purpose of the Burdekin Irrigation Project (BIP) is to help growers reduce water and energy use. There are currently over 50 growers involved in the project. Further opportunities to participate are coming up in the next few months with round three expressions of interest to be opened later in the year.

Terry from SRA gave two examples of growers who are participating in the project. The two examples showed how both over-irrigating and under-irrigating can affect grower profitability and productivity. In the over-irrigating example and using the BIP baseline assessment calculations, it was suggested that the grower reduce their application time by 4 hours. This resulted in the grower saving 360 hrs in pumping time, a reduction in energy use of 2316 kWh, and water savings of 174 ML.

In the under-irrigating example, the BIP baseline identified that the crop was being underwatered, i.e. that less water was being applied with each irrigation event than was being used by the crop. The plan for this farm is to irrigate more frequently.

Through the project, many areas for improvement have been identified on all the participating farms. Solutions have ranged from reducing irrigation time, improving infrastructure, applying ameliorants and much more.

## **Spray Technology and Label Updates**

### **Droplet Requirements for 2,4-D with Irvin Legs**

Since 2018, the APVMA has mandated a very coarse (VC) droplet with the use of 2,4-D. Over the last couple of shed meetings Mika Rowston from Farmacist has discussed converting in-crop sprayers to be in line with 2,4-D regulations. Most of the recommendations have been around switching to floodjets, which can be a costly option if it involves installing brass fittings and fabrication. A new range of low-drift nozzles are available for broadacre sprayers that should provide a cheaper option for growers with existing Irvin legs with spider systems who are not using air-induced (AI) nozzles.

ASJ® has released a 100° nozzle that is non-air inducted, with a low profile and specifically designed for 2,4-D application. This nozzle will produce an extra coarse droplet @ 3 bar and ultra coarse droplet @ 2 bar, but it is not recommended to run below 3 bar.

These nozzles will directly fit into spider leg brass fitting or Teejet bodies, and cost around \$11 each. A whole leg conversion should cost less than \$70, compared to a floodjet conversion which costs a minimum of \$200/leg. This is also an option for growers running AI nozzles on legs to reduce blockages.

### **Changes to Impose® (Imazapic) Label**

Recently the Impose® label has had an amendment that changes the buffer zone requirements, to make its use more flexible for the industry.

Impose used to have a hard 50 m mandatory buffer to wetlands and waterways; this has been updated to a 50 m DOWNWIND buffer only (to natural aquatic areas). *Note, this change applies to the Impose label only; other imazapic products - Flame®, Spark® etc. - continue to have the mandatory 50 m buffer.*

### Use of Verdict® (Haloxypol 520g/L) in Fallow

Pulse Australia has a minor use permit (PER12941) for the use of Verdict® in fallow (prior to planting mungbeans) for control of Rhodes grass with rates from 150-300 mL/ha. ADAMA have a similar product registered for use in summer fallow situations – Firepower 900® (haloxypol 900 g/L).

Given the availability, cost and use pattern of glyphosate this could be a good double knock option on problem paddocks i.e. use glyphosate as the first fallow spray and follow up with Verdict® and Starane® (fluroxypyr). This mixes modes of action for hard-to-control weeds (such as Rhodes Grass) that may be tolerant to glyphosate. Coverage and weed growth stage is important when using Verdict®, ensure you target young actively growing weeds. Droplet sizes should be medium to coarse depending on conditions as there is the risk of drift onto sensitive crops, including surrounding cane. A few drift issues have been reported in the Wet Tropics. Spray water quality can also affect Verdict®, avoid high pH (greater than 8) or alkaline water.

*Verdict® is a group 1 herbicide. Continuous use of it will easily lead to resistance and this has occurred widely in broadacre cropping and also in Crowsfoot grass in the Burdekin. We need to be aware of this as use increases in the region.*

### STAFF CONTACTS

Contact	Title	Contact Number	Email
Office		(07) 4783 1101	<a href="mailto:reception@bps.net.au">reception@bps.net.au</a>
Fax		(07) 4783 5327	
210 Old Clare Road, Ayr QLD, 4807 PO Box 237, Ayr QLD, 4807			
Rob Milla	Manager	0490 036 329	<a href="mailto:rmilla@bps.net.au">rmilla@bps.net.au</a>
Mark Rickards	Commercial Manager	0427 834 800	<a href="mailto:mrickards@bps.net.au">mrickards@bps.net.au</a>
Marian Davis	Extension Agronomist	0428 927 079	<a href="mailto:mdavis@bps.net.au">mdavis@bps.net.au</a>
Jasmine Connolly	Extension Agronomist	0438 934 601	<a href="mailto:jconnolly@bps.net.au">jconnolly@bps.net.au</a>
Wayne Johnstone	Field Officer – Inkerman	0407 960 057	<a href="mailto:wjohnstone@bps.net.au">wjohnstone@bps.net.au</a>
Maddy Molino	Field Officer - Pioneer	0407 167 159	<a href="mailto:mmolino@bps.net.au">mmolino@bps.net.au</a>
Ehlena Lea	Trainee Extension Agronomist	0439 375 411	<a href="mailto:elea@bps.net.au">elea@bps.net.au</a>
Joseph Magatelli	Field Officer – Invicta	0427 372 124	<a href="mailto:jmagatelli@bps.net.au">jmagatelli@bps.net.au</a>
Kristine Patti	Field Officer – Kalamia	0427 167 159	<a href="mailto:kpatti@bps.net.au">kpatti@bps.net.au</a>
Eddie Fabbro	Field Officer – Kalamia	0447 209 152	<a href="mailto:efabbro@bps.net.au">efabbro@bps.net.au</a>
John Nancarrow	Extension Agronomist	0447 069 887	<a href="mailto:jnancarrow@bps.net.au">jnancarrow@bps.net.au</a>